

REMARKS

Claims 11-19 are pending. Claims 11 and 16 are independent claims. The applicant has added new claims 32-41. Claims 11-19 stand provisionally rejected under the doctrine of obviousness-type double patenting. Claims 11-19 stand rejected under 35 U.S.C. Section 102(b).

Provisional Obvious-Type Double Patenting Rejections

Claims 11-19 stand provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 and 33-36 of copending U.S Patent Application No. 09/909,766. To obviate the rejection, the applicant respectfully submits a terminal disclaimer made pursuant to 37 C.F.R. Section 1.321(b). The terminal disclaimer is enclosed with the present response.

102 Rejections

Claim 11 stands rejected under 35 U.S.C. Section 102(b) as being anticipated by Canon (JP 3-234467). Claim 11 also stands rejected under 35 U.S.C. Section 102(b) as being anticipated by Kogyo (JP 2-222533). The applicant has amended claim 11 and respectfully submits that claim 11 includes elements not disclosed by Canon and Kogyo.

Claim 11 now recites "one light source that is operable to transmit light toward the substrate from the side of the substrate with the film to illuminate at least one section on the film and reflect light off the illuminated section such that the reflected light can be received by at least one device that is operable to monitor, while the film is being polished, a dimensional change of the film, the monitoring being based on the reflected light." As recited, the device for monitoring dimensional changes uses light reflected off the film to perform the monitoring.

In sharp contrast, Canon discloses a sensor 3a that uses light reflected not off a film on a substrate, but off a measuring plane 2a of a protective disk 2. See, for example, Figure 1, which shows the measuring light 3d being reflected off the measuring plane 2a. See also page 9 of the enclosed translation, which describes using only the light reflected off the measuring plane to calculate displacement. The applicant respectfully submits that Canon's reflecting of light off the measuring plane 2a is not the same as reflecting light off a film on a substrate, as recited by

claim 11. Although the Examiner suggests that the stamper 1 is the substrate to be polished, such a construction is clearly incorrect, as the stamper 1 does not even contact the polishing pad. Accordingly, Canon fails to disclosed the quoted element of claim 11.

Kyogo also fails to disclose the quoted element of claim 11. Unlike the polisher of claim 11, which can monitor while the film is being polished, Kyogo discloses a system in which a polishing pad must be disengaged from a semiconductor wafer and, hence, polishing must cease in order to illuminate the polished surface of the wafer and detect the reflected light. See, for example, Figure 1, which shows that the polishing pad must be raised to a disengaged position so that light generated from elements 6 can be detected by elements 7. That is, Kyogo's system cannot monitor while polishing. Accordingly, Kyogo fails to disclosed the quoted element of claim 11. For at least the above reason, the applicant respectfully submits that claim 11 and claims 12-15, which depend from claim 11, are in condition for allowance.

Claim 16 stands similarly rejected. The applicant has amended claim 16 and respectfully submits that that claim 16 includes elements not disclosed by Canon and Kogyo.

Claim 16 recites "one light source that is configured to transmit light toward the substrate from the side of the substrate with the film to illuminate at least one section on the film and reflect light off the illuminated section such that the reflected light can be received by at least one means for monitoring, while the film is subject to thickness changes, a thickness change of the film, the monitoring being based on the reflected light signal." For reasons similar to those discussed above, the applicant respectfully submits that neither Canon nor Kyogo anticipates claim 16 and, accordingly, claim 16 and claims 17-19, which depend from claim 16, are in condition for allowance.

New Claims

New claims 32 and 33 depend from claim 11 and, therefore, are in condition for allowance for reasons similar to those discussed above.

New claims 34 and 35 depend from claim 16 and, therefore, are in condition for allowance for reasons similar to those discussed above.

New claim 36 is a method claim that incorporates elements similar to those of claim 11. Hence, the arguments made with respect to claim 11 apply with equal force here. For at least

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this reason, the applicant respectfully submits that claim 36 and claims 37-41, which depend from claim 36, are in condition for allowance.